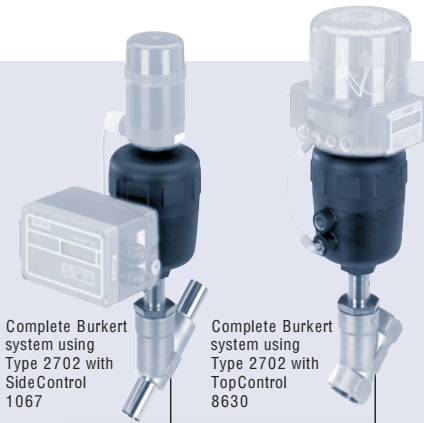
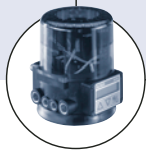


## 2/2-way Angle Seat Control Valve, threaded and weld end connections, DN 13-50



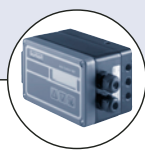
- Excellent control characteristic and high flow rates
- Durable, robust and cost effective
- Ultra compact design, low weight
- Quality certifications available

Type 2702 can be combined with...



### Type 8630

Positioner  
TopControl  
continuous



### Type 1067

Positioner  
SideControl



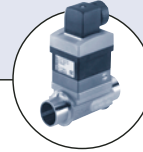
### Type 8635

Positioner  
SideControl



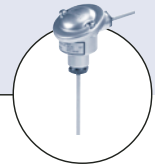
### Type 8323

Pressure  
transmitter



### Type 8030

Flow sensor



### Type ST20

Temperature  
sensor

The 2702 Control Valve consists of an 316L angle seat body with a rugged pneumatic piston actuator.

The parabolic trim results in a flow characteristic approximately 35% larger than conventional control valves. It is available in either stainless steel or stainless steel or with a durable PTFE seal for tight shut-off.

Type 2702 can be actuated by the Continuous TopControl Type 8630 or SideControl Type 1067 and 8635. TopControl/SideControl thus forms a mechanical and functional unit with the pneumatic actuator as a complete control valve system.

This system has been engineered for reliable accurate control in applications where high flow rate is an advantage.

### Proven Applications

- Food and beverage CIP/SIP and auxiliary processes with steam, chilled water and glycol
- Textile machinery (steam, water, air) and dyeing
- Heat exchangers and autoclaves
- Sterilizers and washers
- Distillation apparatus
- Packaging and filling machinery

### Technical data

<b>Materials</b>		Cast stainless steel 316L (conform to 1.4409) PA (polyamide) (PPS on request)
Body		
Actuator		
<b>Sealing</b>		SS/SS (stainless steel/stainless steel) PTFE/SS (PTFE/stainless steel)
<b>Seat leakage IEC 534-4/ EN 1349</b>		Shut-off class IV for St.st./St.st. Shut-off class VI for PTFE/St.st.
<b>Process media gases and liquids (vacuum version on request)</b>		For neutral gases, water, alcohols, oils, fuels, hydraulic liquids, salt solutions, lyes, organic solvents, steam (10 bar(abs)/+180°C)
<b>Viscosity</b>		Max. 600 mm <sup>2</sup> /s
<b>Packing gland</b>		PTFE V-rings (silicone grease) with spring compensation
<b>Nominal pressure</b>		PN 25 (body)
<b>Temperatures</b>		
Fluid		-10°C to +180°C <sup>1)</sup> (max. +130°C for PTFE/St.st. sealing recommended)
Ambient		-10°C to +60°C <sup>1)</sup>
<b>Control media</b>		Compressed air
<b>Pilot pressure</b>		5.5 to 7 bar
<b>Pilot air ports</b>		G 1/4 stainless steel (SS)
<b>Flow direction</b>		Below seat
<b>Mounting position</b>		Any, preferably upright
<b>Flow characteristic</b>		Modified equal percentage
<b>Control ratio (Kvs/KvO)</b>		More than 50:1
<b>Port connections</b>		
Threaded	G	DIN ISO 228 face-to-face DIN 3202-4 M4 (on request) face-to-face DIN 3202-4 M8
	NPT	ANSI/ASME B1.20.1 face-to-face DIN 3202-4 M4
	Rc	ISO 7 face-to-face DIN 3202-4 M4
Weld end	ISO	ISO 4200
	DIN	DIN 11850 series 2
	SMS	SMS 3008 (on request)
	OD-Tube	BS 4821 part 1 (on request) ASME BPE (on request)

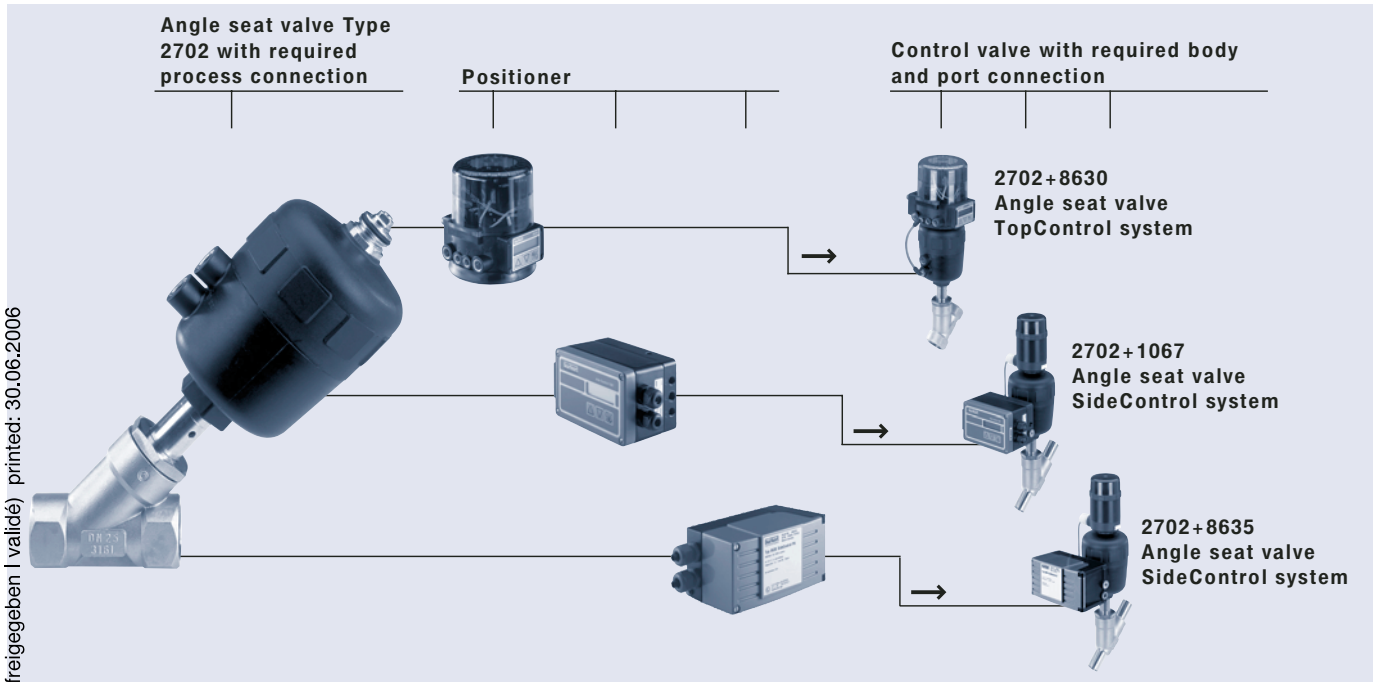
<sup>1)</sup> high temperature version on request

## Angle seat valve system

A complete continuous angle seat valve system consists of an angle seat control valve Type 2702 and a valve actuation system SideControl Type 1067 or Type 8635 or TopControl Type 8630. The positioners are only delivered in combination with an actuator as a part of a complete control valve. The following information is necessary for the selection of a complete control valve:

- **Item no.** of the seat control valve **Type 2702** (see Ordering chart)
- **Item no.** of the desired positioner **Type 8630, 1067 or 8635** (see separate datasheets)

### Examples for variations of continuous angle seat valve systems



#### Valve actuation system: TopControl Type 8630



0/4-20 mA  
0-5/10 V  DeviceNet™

The Type 8630 is a digital electropneumatic positioner to be combined with pneumatically actuated process valves. Its compact design with an integrated position encoder and digital text display was designed for the growing requirements of industrial applications. Signal processing, regulation, and control of the internal positioning system are done using microprocessor-controlled electronics. Thanks to its easy-to-use operating structure, the positioner is simple and easy to operate despite its wide range of functionality.

##### Important features:

- Automatic commissioning of the control valve system and the optional process controller using the functions X-Tune or P.Co-Tune
- Automatic or manual definition of correction characteristic curves
- Binary inputs and outputs
- Analog output
- Fit seamlessly to Bürkert process valve systems
- 24VDC 3-wire

#### Valve actuation system: SideControl Type 8635, 2-wire, intrinsically safe



4-20 mA  

The Type 8635 is a digital electropneumatic positioner to be combined with pneumatically actuated process valves. Its robust, compact design was designed for the growing requirements of the process technology industry. Signal processing, regulation, and control of the internal positioning system are done using microprocessor-controlled electronics. Thanks to its easy-to-use operating structure, the positioner is simple and easy to operate despite its wide range of functionality.

##### Important features:

- Automatic commissioning of the control valve system and the optional process controller using the functions X-Tune or P.Co-Tune
- Automatic or manual definition of correction characteristic curves
- Binary inputs and outputs
- Analog output
- Mounting on variable acting valves according to DIN IEC 534-6 (NAMUR) and Bürkert process control valves
- 2-wire, power supply through setpoint or PROFIBUS PA
- ATEX certification
  - II 2G EEx ia IIC T6 Zone 1
  - II 3G/D EEx ia IIC T6 Zone 2/22
- Robust housing of hardcoated and plastic plated aluminum

#### Valve actuation system: SideControl Type 1067



0/4-20 mA  
0-10 V

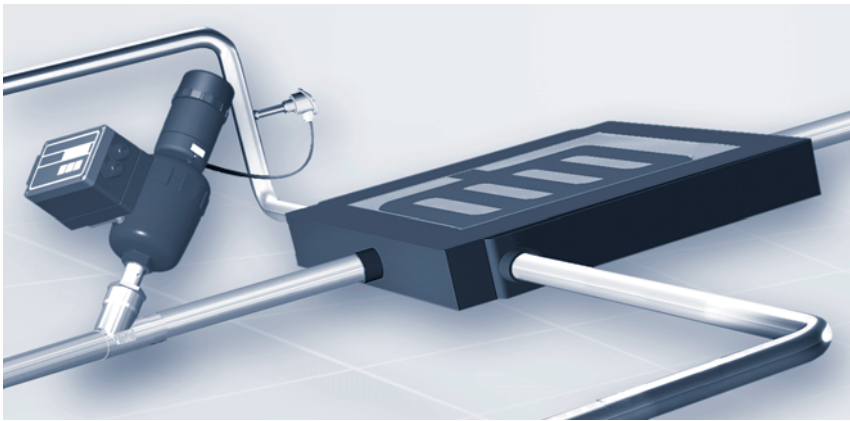
The Type 1067 is a digital electropneumatic positioner to be combined with pneumatically actuated process valves. Its robust, very compact design was designed for the growing requirements of the process technology industry.

Signal processing, regulation, and control of the internal or external positioning system are done using microprocessor-controlled electronics. Thanks to its easy-to-use operating structure, the positioner is simple and easy to operate despite its wide range of functionality.

##### Important features:

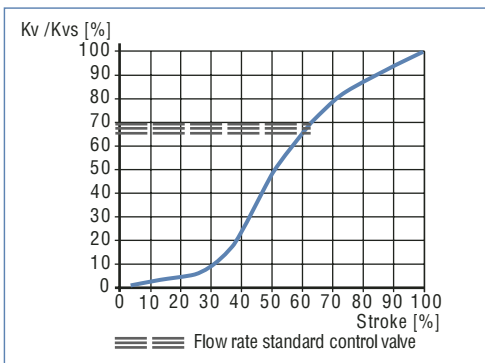
- Automatic commissioning of the control valve system using the X-Tune functions
- Automatic or manual definition of correction characteristic curves.
- Binary inputs and outputs
- Analog output
- Mounting on variable acting valves according to DIN IEC 534-6 (NAMUR) and Bürkert process control valves
- 3-wire, 24 VDC
- Keypad/display unit
- Remote version with positioner separate from control valve

Application example



A 2702 control valve with a 1067 local PID controller. The valve is controlling the exit temperature of a media flowing-through a heat exchanger. The process input is a simple temperature transmitter.

Flow characteristic



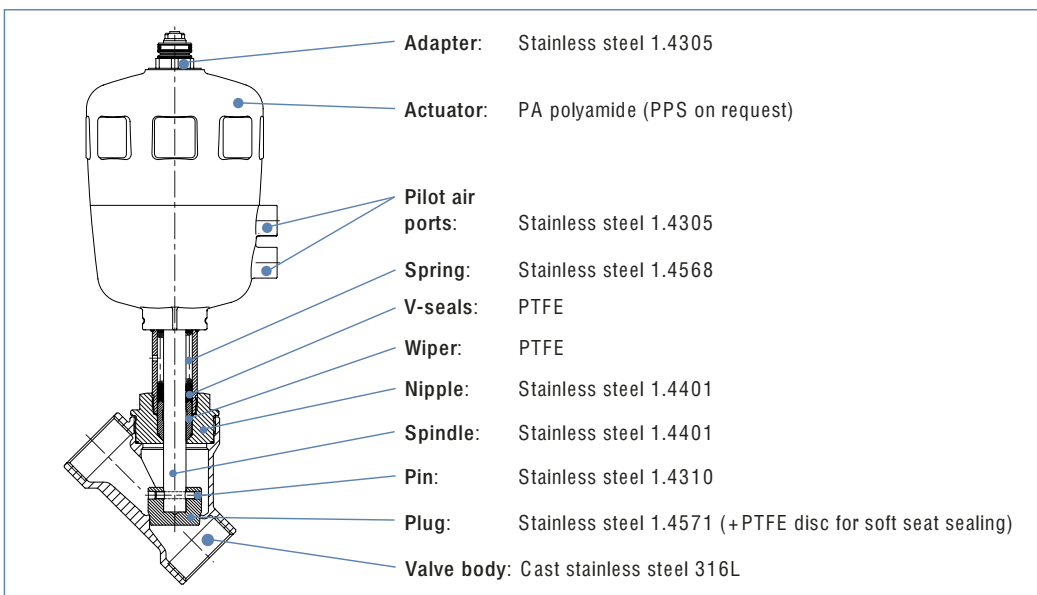
Remarks on the flow characteristic

Modified equi-percentile flow characteristic, engineered for a quick response during peak flow demand (an advantage for many processes like heating/cooling with heat exchangers) and fine control at lower flow.

Kv values [m³/h]

Port size and orifice [mm]	Actuator size [mm]	Stroke [%]											
		5	10	20	30	40	50	60	70	80	90	100	
13/15	F-80	0.23	0.24	0.26	0.35	0.7	1.85	2.9	3.5	4	4.3	4.5	
20	F-80	0.30	0.33	0.42	0.7	2.85	5.3	6.6	7.5	8.2	8.6	9	
25	F-80	0.39	0.41	0.60	1.25	4.5	8.5	10.5	12.2	13.5	14.2	15	
32	F-80	0.55	0.65	0.95	1.5	4	9.3	13.8	16.5	18.8	21	23	
40	G-100	0.65	0.85	1.5	5	14	20	25	27	30	33	35	
50	G-100	1	1.3	2	5	16	27	34	41	45	49	53	

Materials



## Ordering chart : Angle seat valve (without positioner)

## Threaded port



Control function	Port size and orifice		Actuator size Ø [mm]	Kvs value [m³/h]	Op. pressure ≤ +180°C [bar]	Item no. seal system* SS/SS	Item no. seal system* PTFE/SS
	[mm]	[inch]					
<b>Threaded ports acc. G, DIN ISO 228, face-to-face acc. DIN 3202-4 M4 (long dimension), flow below seat, on request</b>							
<b>A</b>  2/2-way, NC by spring return	13	1/2"	F-80	4.5	16	■	■
	20	3/4"	F-80	9	16	■	■
	25	1"	F-80	15	16	■	■
	32	1 1/4"	F-80	23	15	■	■
	40	1 1/2"	G-100	35	12.5	■	■
	50	2"	G-100	53	7.2	■	■
<b>B</b>  2/2-way, NO by spring return	13	1/2"	F-80	4.5	16	■	■
	20	3/4"	F-80	9	16	■	■
	25	1"	F-80	15	16	■	■
	32	1 1/4"	F-80	23	15	■	■
	40	1 1/2"	G-100	35	12.5	■	■
	50	2"	G-100	53	7.2	■	■
<b>Threaded ports acc. G, DIN ISO 228, face-to-face acc. DIN 3202-4 M8 (short dimension), flow below seat</b>							
<b>A</b>  2/2-way, NC by spring return	13	1/2"	F-80	4.5	16	165 523	165 486
	20	3/4"	F-80	9	16	165 526	165 489
	25	1"	F-80	15	16	165 531	165 513
	32	1 1/4"	F-80	23	15	165 537	165 515
	40	1 1/2"	G-100	35	12.5	165 540	165 518
	50	2"	G-100	53	7.2	165 540	165 518
<b>B</b>  2/2-way, NO by spring return	13	1/2"	F-80	4.5	16	165 580	165 546
	20	3/4"	F-80	9	16	165 584	165 549
	25	1"	F-80	15	16	165 566	165 553
	32	1 1/4"	F-80	23	15	165 569	165 557
	40	1 1/2"	G-100	35	12.5	165 592	165 572
	50	2"	G-100	53	7.2	165 592	165 572
<b>Threaded ports acc. NPT, ANSI/ASME B1.20.1, face-to-face acc. DIN 3202-4 M4, flow below seat</b>							
<b>A</b>  2/2-way, NC by spring return	13	1/2"	F-80	4.5	16	462 101	462 095
	20	3/4"	F-80	9	16	462 102	462 096
	25	1"	F-80	15	16	462 103	462 097
	32	1 1/4"	F-80	23	15	462 104	462 098
	40	1 1/2"	G-100	35	12.5	462 105	462 099
	50	2"	G-100	53	7.2	462 106	462 100
<b>B</b>  2/2-way, NO by spring return	13	1/2"	F-80	4.5	16	462 115	462 107
	20	3/4"	F-80	9	16	462 116	462 108
	25	1"	F-80	15	16	462 110	462 111
	32	1 1/4"	F-80	23	15	462 121	462 112
	40	1 1/2"	G-100	35	12.5	462 122	462 113
	50	2"	G-100	53	7.2	462 123	462 114
<b>Threaded ports acc. Rc, ISO 7, face-to-face acc. DIN 3202-4 M4, flow below seat</b>							
<b>A</b>  2/2-way, NC by spring return	13	1/2"	F-80	4.5	16	507 147	507 141
	20	3/4"	F-80	9	16	507 148	507 142
	25	1"	F-80	15	16	507 149	507 143
	32	1 1/4"	F-80	23	15	507 150	507 144
	40	1 1/2"	G-100	35	12.5	507 151	507 145
	50	2"	G-100	53	7.2	507 152	507 146
<b>B</b>  2/2-way, NO by spring return	13	1/2"	F-80	4.5	16	507 165	507 153
	20	3/4"	F-80	9	16	507 166	507 154
	25	1"	F-80	15	16	507 155	507 161
	32	1 1/4"	F-80	23	15	507 156	507 162
	40	1 1/2"	G-100	35	12.5	507 157	507 163
	50	2"	G-100	53	7.2	507 158	507 164

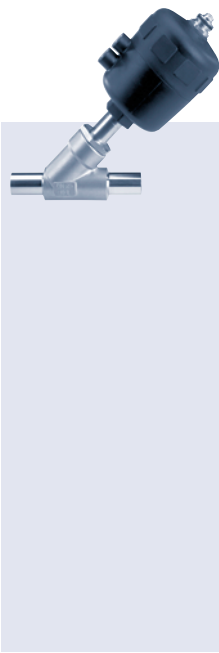
\*seal system:

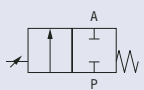
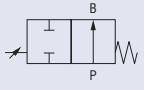
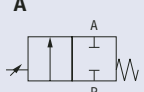
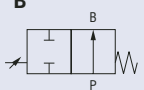
- St.st./St.st.: plug stainless steel/seat stainless steel
- PTFE/St.st.: plug PTFE/seat stainless steel

■ on request

Ordering chart: Angle seat valve (without positioner)

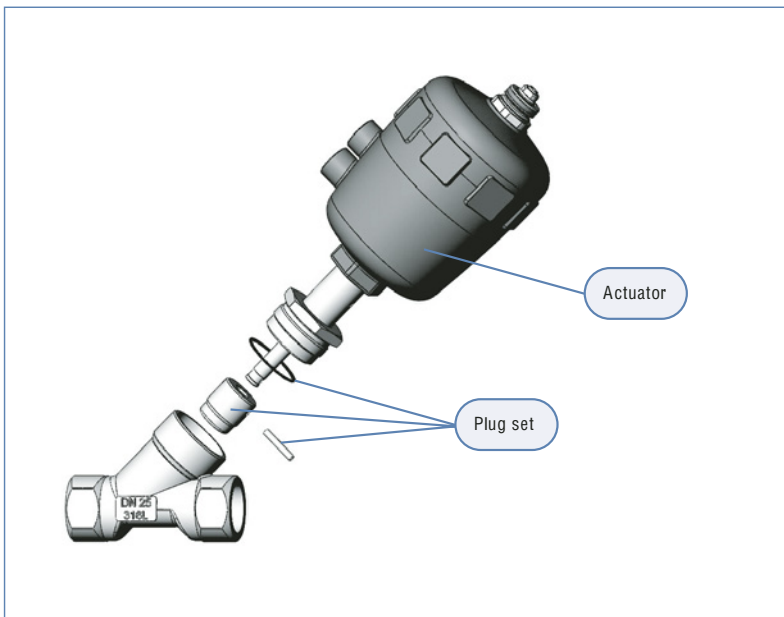
Weld end



Control function	Port size and orifice		Connection DS x WS [mm]	Actuator size [mm]	Kvs value [m³/h]	Op. pressure ≤ +180°C [bar]	Item no. seal system* SS/SS	Item no. seal system* PTFE/SS
	[mm]	[inch]						
<b>Weld end acc. ISO 4200, flow below seat</b>								
<b>A</b>  2/2-way, NC by spring return	15	1/2"	21.3 x 1.6	F-80	4.5	16	165 524	165 487
	20	3/4"	26.9 x 1.6	F-80	9	16	165 529	165 511
	25	1"	33.7 x 2.0	F-80	15	16	165 534	165 514
	32	1 1/4"	42.4 x 2.0	F-80	23	15	165 538	165 516
	40	1 1/2"	48.3 x 2.0	G-100	35	12.5	165 541	165 519
	50	2"	60.3 x 2.0	G-100	53	7.2	165 544	165 521
<b>B</b>  2/2-way, NO by spring return	15	1/2"	21.3 x 1.6	F-80	4.5	16	165 582	165 547
	20	3/4"	26.9 x 1.6	F-80	9	16	165 585	165 551
	25	1"	33.7 x 2.0	F-80	15	16	165 567	165 554
	32	1 1/4"	42.4 x 2.0	F-80	23	15	165 570	165 559
	40	1 1/2"	48.3 x 2.0	G-100	35	12.5	165 596	165 573
	50	2"	60.3 x 2.0	G-100	53	7.2	165 599	165 578
<b>Weld end acc. DIN 11850 series 2, flow below seat</b>								
<b>A</b>  2/2-way, NC by spring return	15	1/2"	19.0 x 1.5	F-80	4.5	16	165 525	165 488
	20	3/4"	23.0 x 1.5	F-80	9	16	165 530	165 512
	25	1"	29.0 x 1.5	F-80	15	16	165 536	165 030
	32	1 1/4"	35.0 x 1.5	F-80	23	15	165 539	165 517
	40	1 1/2"	41.0 x 1.5	G-100	35	12.5	165 542	164 778
	50	2"	53.0 x 1.5	G-100	53	7.2	165 545	165 522
<b>B</b>  2/2-way, NO by spring return	15	1/2"	19.0 x 1.5	F-80	4.5	16	165 583	165 548
	20	3/4"	23.0 x 1.5	F-80	9	16	165 586	165 552
	25	1"	29.0 x 1.5	F-80	15	16	165 568	165 556
	32	1 1/4"	35.0 x 1.5	F-80	23	15	165 591	165 571
	40	1 1/2"	41.0 x 1.5	G-100	35	12.5	165 597	165 574
	50	2"	53.0 x 1.5	G-100	53	7.2	165 600	165 579

\*seal system:  
 • St.st./St.st.: plug stainless steel/seat stainless steel  
 • PTFE/St.st.: plug PTFE/seat stainless steel

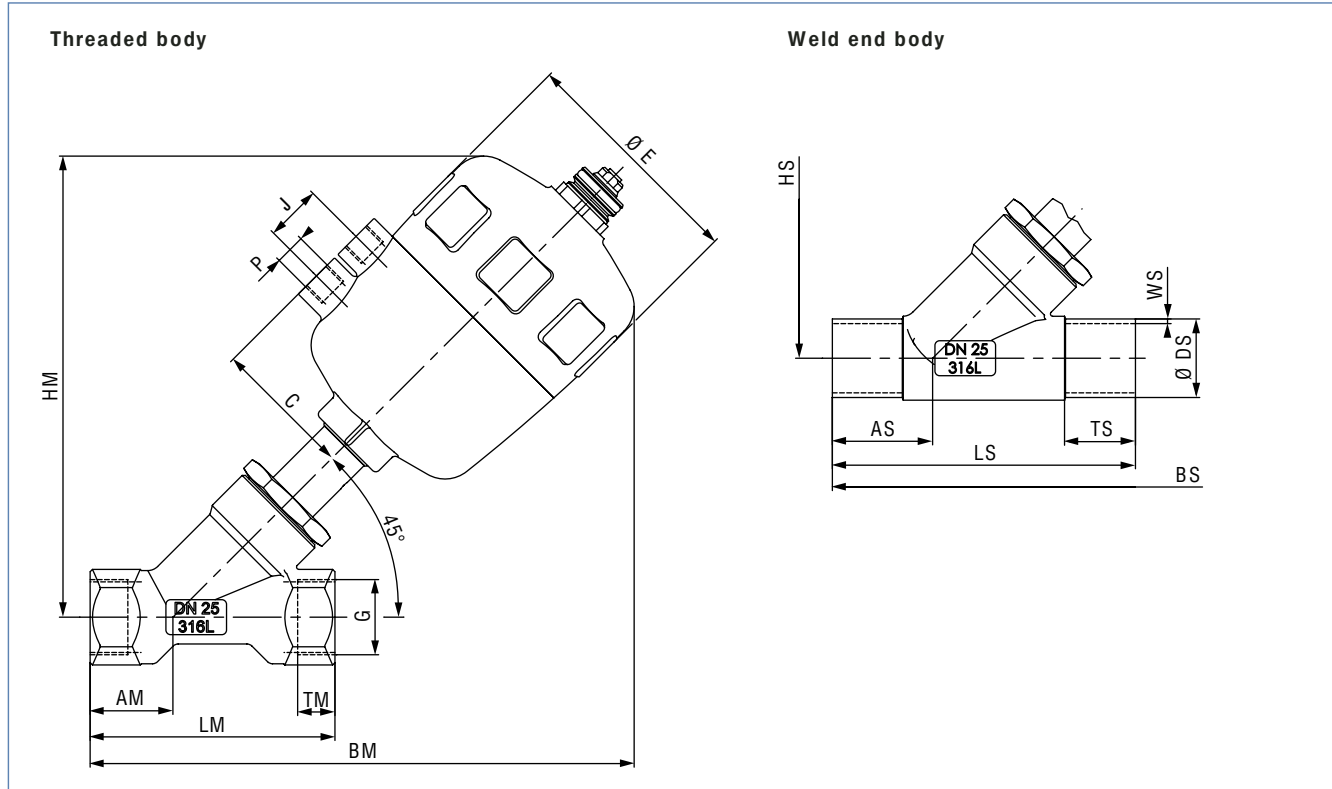
Spare parts for Type 2702 – DN 13-50 (on request)



DTS 1000049759 EN Version: C Status: RL (released | freigegeben | validé) printed: 30.06.2006

Dimensions [mm]

Angle seat valve with threaded and weld end connection



All actuators

Orifice [mm]	Actuator size	Ø E	C	P	J
13/15	F-80	101	60	G 1/4	24
20	F-80	101	60	G 1/4	24
25	F-80	101	60	G 1/4	24
32	F-80	101	60	G 1/4	24
40	G-100	127	73	G 1/4	30
50	G-100	127	73	G 1/4	30

Threaded ends

All threaded bodies Orifice [mm]	HM	G, NPT and Rc thread with face-to-face acc. DIN 3202-4 M4									G thread with face-to-face acc. DIN 3202-4 M8				
		BM	LM	AM	G thread		NPT thread		Rc thread		BM	LM	AM	G	TM
					G	TM	G	TM	G	TM					
13	193	224	85	31	G 1/2	14	NPT 1/2	13.7	Rc 1/2	13.2	217	65	24	G 1/2	14
20	193	228	95	35	G 3/4	16	NPT 3/4	14	Rc 3/4	14.5	220	75	27	G 3/4	16
25	198	234	105	35.5	G 1	18	NPT 1	16.8	Rc 1	16.8	228	90	29.5	G 1	18
32	205	246	120	41	G 1 1/4	16	NPT 1 1/4	17.3	Rc 1 1/4	19.1	241	110	36	G 1 1/4	16
40	260	300	130	40	G 1 1/2	18	NPT 1 1/2	17.3	Rc 1 1/2	19.1	295	120	35	G 1 1/2	18
50	272	317	150	45	G 2	24	NPT 2	17.6	Rc 2	23.4	-	-	-	-	-

Weld ends

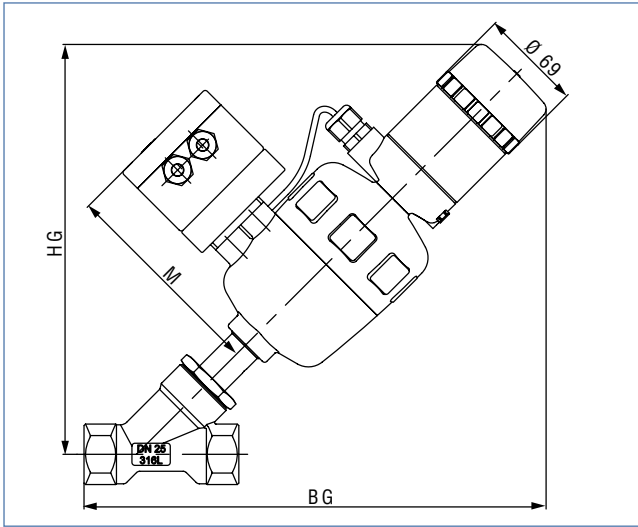
All weld end bodies Orifice [mm]	HS	ISO 4200 and DIN 11850 series 2									BS 4825 P1, ASME BPE, SMS 3008										
		BS	LS	AS	ISO 4200			DIN 11850 S2			Orifice [inch]	BS	LS	AS	BS 4825 P1, ASME BPE			SMS 3008			
					ØDS	TS	WS	ØDS	TS	WS					ØDS	TS	WS <sup>1)</sup>	WS <sup>2)</sup>	ØDS	TS	WS
15	198	232	100	34	21.3	20	1.6	19	20	1.5	1/2"	244	135	46	12.7	38	1.2	1.65	12	38	1
20	198	237	115	39	26.9	25	1.6	23	20	1.5	3/4"	250	145	52	19.05	38	1.2	1.65	18	38	1
25	199	242	130	43	33.7	30	2	29	26	1.5	1"	250	152	51	25.4	38	1.65	1.65	25	38	1.2
32	209	244	145	35	42.4	26	2	35	26	1.5	-	-	-	-	-	-	-	-	-	-	-
40	263	312	160	49	48.3	30	2	41	26	1.5	1 1/2"	323	182	60	38.1	38	1.65	1.65	38	38	1.2
50	277	327	175	50	60.3	30	2.6	53	26	1.5	2"	341	210	64	50.8	45	1.65	1.65	51	45	1.2

<sup>1)</sup> BS 4825 P1

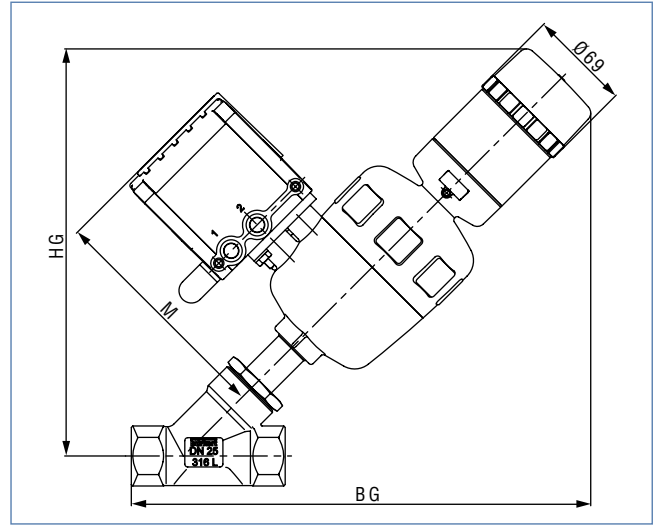
<sup>2)</sup> ASME BPE

Dimensions [mm]

Control valve system 2702 + 1067

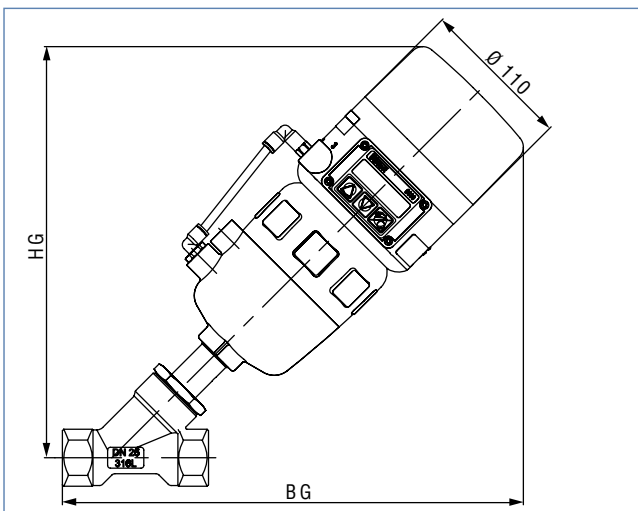


Control valve system 2702 + 8635



All bodies orifice [mm]	Actuator size [mm]	M		Threaded body			Weld end body		
		2702 + 1067	8635	HG	BG	G thread with face-to-face acc. DIN 3202-4 M4	HG	BG	BS 4825 P1 ASME BPE SMS 3008
13/15	F-80	142	160	273	304	297	278	312	324
20	F-80	142	160	273	308	300	278	317	330
25	F-80	142	160	278	314	308	279	322	330
32	F-80	142	160	285	326	321	289	324	-
40	G-100	155	173	336	376	371	340	389	400
50	G-100	155	173	349	394	-	354	404	418

Control valve system 2702 + 8630



All bodies orifice [mm]	Actuator size [mm]	Threaded body			HG	Weld end body	
		HG	BG	G thread with face-to-face acc. DIN 3202-4 M4		HG	BG
13/15	F-80	291	322	315	296	330	342
20	F-80	291	326	318	296	335	348
25	F-80	296	332	326	297	340	348
32	F-80	303	344	339	307	342	-
40	G-100	354	394	389	358	407	418
50	G-100	367	412	-	372	422	436

DTS 1000049759 EN Version: C Status: RL (released | freigegeben | validé) printed: 30.06.2006

